

**In the Drawings:**

Please replace the original drawing sheet for Fig 6 / Fig 7 with the enclosed Replacement Drawing Sheet.

**REMARKS**

Claims 1-13, 15, 17-40, 42-45, and 52-59, and 61-71 are pending.

Claims 1, 10, 12, 13, 15, 18, 19, 20, 28, 39, 42-45, and 59 have been amended; claims 14, 16, 41, 46-51, and 60 have been cancelled without prejudice or disclaimer of the subject matter; and claims 70-72 are new. Support for the new claims can be found, for example, at paragraph 39 and 62-63.

Applicants wish to thank Examiner Tweel for granting Applicants' representative, Timothy Hsieh, the courtesy of an interview conducted November 8, 2005. During the interview possible claim amendments to further clarify the type of rights information were discussed.

In the Office Action, the Examiner objected to the drawings as failing to comply with 37 C.F.R. 1.84(p)(5); objected to the disclosure due to informalities; rejected claims 1-7, 12-16, 18, and 19 under 35 U.S.C. 103(a) as being unpatentable over *Patek et al.* (U.S. Patent No. 6,541,211); rejected claims 8, 9, and 20-27 under 35 U.S.C. 103(a) as being unpatentable over *Patek et al.* in view of *Brady et al.* (U.S. Patent No. 6, 201,474); rejected claims 10, 11, 17, 28-41, 44-59, and 66-69 under 35 U.S.C. 103(a) as being unpatentable over *Patek et al.* in view of *McNeil* (U.S. Patent No. 6,429,016); rejected claim 42 under 35 U.S.C. 103(a) as being unpatentable over *Patek et al.* in view of *McNeil* and further in view of *McDonald* (U.S. Patent No. 6,211,781); rejected claim 43 under 35 U.S.C. 103(a) as being unpatentable over *Patek et al.* in view of *McNeil* and further in view of *UmiKer* (U.S. Patent No. 6,483,434); and rejected claims 60-65 under 35 U.S.C. 103(a) as being unpatentable over *Patek et al.* in view of *McNeil* and further in view of Valiulis (U.S. Patent No. 6,317,028).

**Objection to the Drawings**

The Examiner objected to the drawings as failing to comply with 37 C.F.R. 1.84(p)(5). In particular, the Examiner noted that the drawings did not include reference no. 610. Applicants have amended the drawings to include reference no. 610. A replacement drawing sheet has been provided that includes the reference numeral "610" in Figure 6. This amendment to the drawing sheet is further reflected on the corresponding Annotated Sheet.

**Objection to the Specification**

The Examiner objected to the disclosure due to informalities. Specifically, the Examiner stated that on paragraph 31, line 5, the word “are” is not needed before “can”; on paragraph 50, line 3, the word “the” before “tubes” is not needed; and on paragraph 62, line 12, the word “reagents” should be singular. Applicants have amended the specification as suggested by the Examiner.

**Claims 1-7, 12-16, 18, and 19**

The Examiner rejected claims 1-7, 12-16, 18, and 19 under 35 U.S.C. 103(a) as being unpatentable over *Patek et al.* Applicants traverse the rejection for the following reasons.

Claim 1 recites an apparatus for associating information with a biological reagent including, *inter alia*, at least one tag comprising a carrier antenna coupled to the carrier, wherein the tag is operable to be read by a reader and wherein the tag comprises licensing rights information for at least one of the carrier and the biological reagent. Claim 15 recites an apparatus for associating information with a biological reagent including, *inter alia*, at least one RFID tag comprising a RFID carrier antenna coupled to the carrier, wherein the RFID tag is operable to be read by a RFID reader and wherein the RFID tag comprises licensing rights information for at least one of the carrier and the biological reagent.

In contrast, *Patek et al.* discloses use of an RFID in conjunction with a method to synthesize a combinatorial library of chemical compounds. Specifically, this reference discloses that an RFID can be used to record the identity of frames and lanterns (see col. 16, lines 12-18). As discussed throughout the cited patent, the method can use many identical frames with multiple lanterns on each frame. Because the method can be used to synthesize a library, for example, of greater than 100,000 compounds, the reference discloses that RFIDs can be useful for recording the identity of the many lanterns and frames. Nowhere, however, do *Patek et al.* disclose or suggest that a tag can include licensing rights information.

Moreover, claims 1 and 15 of the present application relates to licensing rights information for a carrier and/or a biological reagent. As disclosed at paragraph [062] of the present specification, biological samples or reagents are typically licensed separately from

instruments designed to operate on the biological reagents. Thus, the licensing rights information on the claimed RFID can include reagent license information that allows use of licensed biological reagent for a particular biological analysis on only a licensed instrument. The licensing rights information can also include instrument license information to allow use of licensed instruments to carry out a particular biological analysis with only licensed reagents. Applicants submit that *Patek et al.* fails to disclose or suggest that a tag can include licensing rights information for a carrier and/or a biological reagent.

Applicants note that the Examiner stated, with respect to claims 21 and 22, that the type of information contained in an RFID chip is not considered a patentable innovation “as RFID chips have been used in a wide variety of applications such as inventory, delivery management, sample information, and location” (Office Action dated October 4, 2005, page 6, second paragraph.). The Examiner also stated that “[i]nformation such as nucleic acid sequence and spot pattern are easily programmed into RFID technology.” (*Id.*) Applicants respectfully submit that the type of information contained in the tags as presently claimed is patentably distinct from the information contained in the RFID chips disclosed in the cited references. Specifically, the information contained in the RFID chips cited by the Examiner are inherent attributes of the items attached to the RFID chip. For example, the identity of the frame and lantern on the RFID chip in *Patek et al.* can convey information relating to the chemical composition of the compound at a specific point during synthesis.

In contrast, claims 1 and 15 of the instant application recites a tag including licensing rights information, which is not an inherent attribute of the carrier or biological reagent, but dependent on provisions in a license agreement. Moreover, the licensing rights information can further be used to authorize use of the carrier and/or the reagent for a particular instrument as recited in claims 71 and 72.

Applicants further note that the Examiner cited *Valiulis*, with respect to claim 60-65, as disclosing that RFIDs can be used for authentication. Applicants respectfully disagree with the Examiner’s characterization of this reference. *Valiulis* discloses that RFIDs can be incorporated into consumer products for inventory tracking and theft prevention. In particular, this reference discloses that a consumer product can include an RFID to transmit and receive a Universal Product Protection Code (UPPC) (col. 13, lines 33-40). At the point of sale of the

consumer product, an interrogator 51 can transmit password information, via RFID 65, to security and control logic 71 (col. 10, lines 30-53 and col. 14, lines 53-64). Security and control logic 71 then disables the disabling device 75 (col. 15, lines 2-4). Thus, *Valiulis* discloses only that an RFID can be used to store UPPC information (col. 14, line 64 to col. 15, line 1) and used to transmit password information. UPPC information is inherent to the consumer product, similar to the type of information disclosed by *Patek et al.* Applicants submit that this reference neither relates to a carrier and/or a biological reagent nor discloses or suggest an RFID including licensing rights information.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims under 35 U.S.C. 103(a) as being unpatentable over *Patek et al.* Applicants submit that claims 1 and 15 are in condition for allowance, as are claims 1-13, 70-71, and 17-19 at least by virtue of their dependency from allowable claims 1 and 15, respectively.

#### **Claims 8-9 and 20-27**

The Examiner rejected claims 8, 9, and 20-27 under 35 U.S.C. 103(a) as being unpatentable over *Patek et al.* in view of *Brady et al.* As discussed above, Applicants submit that claims 8 and 9 are allowable at least by virtue from their dependency from allowable claim 1.

Claim 20 recites an apparatus for associating licensing rights information with a microarray including, among other things, an RFID tag having an RFID antenna coupled to the substrate, wherein the licensing rights information comprises information on whether a user has a valid license to use the microarray. As discussed above, *Patek et al.* fails to disclose or suggest that an RFID tag can include licensing rights information for a carrier and/or a biological reagent. *Brady et al.* fails to correct this deficiency. Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims under 35 U.S.C. 103(a) as being unpatentable over *Patek et al.* in view of *Brady et al.* Applicants submit that claim 20 is in condition for allowance, as are claims 21-27 at least by virtue of their dependency from allowable claim 20.

**Claims 10, 11, 17, 28-41, 44-59, and 66-69**

The Examiner rejected claims 10, 11, 17, 28-41, 44-59, and 66-69 under 35 U.S.C. 103(a) as being unpatentable over *Patek et al.* in view of *McNeil*. Applicants submit that claims 10, 11, and 17 are allowable for the reasons discussed above.

Claim 28 recites an apparatus for associating information with a biological reagent including, *inter alia*, a carrier for the biological reagent, the carrier coupled to an RFID tag, wherein the RFID tag is operable to be read by an RFID reader and wherein the RFID tag contains licensing rights information. Claim 28 further recites at least one instrument for reading the identification information, and performing operations on the biological reagent, the instrument comprising an output for providing an authorization indication of the biological reagent based on the licensing rights information. As discussed above, *Patek et al.* fails to disclose or suggest that an RFID tag can include licensing rights information or an instrument comprising output for providing an authorization based on the licensing rights information. *McNeil* fails to correct this deficiency. Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claim 28 under 35 U.S.C. 103(a) as being unpatentable over *Patek et al.* in view of *McNeil*. Applicants submit that claim 28 is in condition for allowance.

Claim 29 recites an apparatus for associating information with a biological reagent including, *inter alia*, at least one RFID tag comprising a carrier RFID antenna and wherein the RFID tag comprises instrument operation information for a biological reagent. As discussed above, *Patek et al.* discloses that use of RFIDs can be useful for recording the identity of lanterns and frames during synthesis of chemical compounds. This reference fails, however, to disclose or suggest an RFID tag that includes instrument operation information for a biological reagent as in claim 29 of the present application. *McNeil* discloses a robotic positioning system that uses a RFID to “identify the robot 3 and to determine if it [is] at the correction location 5” (col. 13, lines 50-55). *McNeil* also fails to disclose or suggest an RFID tag that includes instrument operation information for a biological reagent as in claim 29 of the present application. Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claim 29 under 35 U.S.C. 103(a) as being unpatentable over *Patek et al.* in view of

*McNeil*. Applicants submit that claim 29 is in condition for allowance, as are claims 30-38, at least by virtue of their dependency on allowable claim 29.

Claim 39 recites a method for associating information regarding biological reagents with carriers for supporting the biological reagents including, among other things, receiving from a tag, real-time physical location information associated with a biological reagent. As discussed above, *Patek et al.* discloses only that use of RFIDs can be useful for recording the identity of lanterns and frames during synthesis of chemical compounds. It fails to disclose or suggest that a tag can provide real-time physical location information associated with a biological reagent as recited in claim 39 of the present application. *McNeil* fails to correct this deficiency. As discussed above, *McNeil* discloses the use of an RFID to confirm that a robot reaches a destination. Specifically, it discloses a robotic positioning system that uses an RFID to determine if robot 3 is at the correction location 5 only after robot 3 reaches its final destination (col. 13, lines 44-55). Applicants submit that this reference fails to disclose or suggest a tag that can provide real-time physical location information associated with a biological reagent. Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claim 39 under 35 U.S.C. 103(a) as being unpatentable over *Patek et al.* in view of *McNeil*. Applicants submit that claim 39 is in condition for allowance, as are claims 40, 42-45, and 52-58, at least by virtue of their dependency on allowable claim 39.

Claim 59 recites a method for associating information regarding biological reagents with carriers for supporting the biological reagents including, among other things, receiving from an RFID tag licensing rights information associated with the biological reagent, and authorizing under terms of a license, use of a biological reagent in a biological assay. As discussed above, neither *Patek et al.* nor *McNeil* disclose or suggest receiving from an RFID tag licensing rights information associated with the biological reagent or authorizing under terms of a license, use of a biological reagent in a biological assay. The Examiner also cited *Valiulis*, with respect to claim 60-65, as disclosing that RFIDs can be used for authentication. As discussed above, this reference discloses only that an RFID can be used to store UPPC information (col. 14, line 64 to col. 15, line 1) and used to transmit password information (col. 10, lines 30-53 and col. 14, lines 53-64). The password information is sent to security and control logic 71 which then disables the disabling device 75 (col. 15, lines 2-4). Thus, *Valiulis*

fails to disclose or suggest either receiving from an RFID tag licensing rights information associated with the biological reagent or authorizing under terms of a license, use of a biological reagent in a biological assay. Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claim 99 under 35 U.S.C. 103(a). Applicants submit that claim 59 is in condition for allowance, as are claims 61-65, at least by virtue of their dependency on allowable claim 59.

Claim 66 recites a method for associating information regarding operations for biological reagents with carriers for supporting the biological reagents including, *inter alia*, receiving, from an RFID tag, instrument operation information associated with the biological reagent. As discussed above, *Patek et al.* discloses that use of RFIDs can be useful for recording the identity of lanterns and frames during synthesis of chemical compounds. This reference fails, however, to disclose or suggest receiving, from an RFID tag, instrument operation information for a biological reagent as in claim 66 of the present application. *McNeil* discloses a robotic positioning system that uses an RFID to “identify the robot 3 and to determine if it [is] at the correction location 5” (col. 13, lines 50-55). *McNeil* also fails to disclose or suggest receiving, from an RFID tag, instrument operation information for a biological reagent as in claim 66 of the present application. Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claim 66 under 35 U.S.C. 103(a) as being unpatentable over *Patek et al.* in view of *McNeil*. Applicants submit that claim 66 is in condition for allowance, as are claims 30-38, at least by virtue of their dependency on allowable claim 67-69.

#### **Claims 42 and 43**

The Examiner rejected claim 42 under 35 U.S.C. 103(a) as being unpatentable over *Patek et al.* in view of *McNeil* and further in view of *McDonald* and rejected claim 43 under 35 U.S.C. 103(a) as being unpatentable over *Patek et al.* in view of *McNeil* and further in view of *UmiKer*.

Claim 42 depends from claim 40 which depends from claim 39 and recites receiving real-time physical location information comprises receiving tag triangulation parameters from a plurality of triangulation tag readers proximate to the tag. As discussed above, *Patek et al.*, and *McNeil* fail to disclose or suggest receiving tag triangulation parameters from a



plurality of triangulation tag readers proximate to the tag. *McDonald* discloses using an RF tag to locate mail as it moves through the mail delivery system (Abstract). In particular, this reference discloses that because of the large volume of mail and the time sensitive nature of delivery, tags allow a user to pin-point bottlenecks that slow down mail delivery, locate specific pieces of mail intended for a particular truck to ensure timely loading of the mail piece on the proper truck, and indicate when a mail piece is behind schedule or off a planned track (col. 1, lines 27-37). In contrast, claim 42 relates to receiving tag triangulation parameters in a method for associating information regarding biological reagents with carriers for supporting the biological reagents. Rather than addressing scheduling issues as *McDonald* does, the claimed method addresses the problem of, for example, locating a carrier or reagent within an instrument with no access for visible location or identification. Obviousness cannot be established by combining the teachings of prior art to produce the claimed invention absent some teaching, suggestion or incentive supporting the combination in the prior art. Applicants submit that none of the cited references provide the requisite motivation to combine *McDonald* with the other cited references to achieve Applicants' invention.

Claim 43 depends from claim 40 which depends from claim 39 and recites receiving real-time physical location information comprising receiving GPS coordinates from a GPS receiver physically coupled to a carrier. As discussed above, *Patek et al.*, and *McNeil* fail to disclose or suggest this element. Applicants submit that *UmiKer* fails to correct this deficiency. *UmiKer* discloses that transponders (or "tags") are placed within reusable containers for tracking purposes. When the containers reach their destination, a "central" or "remote" processing unit then interrogates the transponders (col. 1, lines 65-67). According to *UmiKer*, the processing unit is coupled to the Internet or a GPS link (col. 2, lines 1-3; and claim 8). Thus, this reference fails to disclose or suggest receiving real-time physical location information comprising receiving GPS coordinates from a GPS receiver physically coupled to a carrier as recited in claim 43 of the present application. Accordingly, Applicants request that the Examiner reconsider the rejection of claim 43 under 35 U.S.C. 103(a) as being unpatentable over *Patek et al.* in view of *McNeil* and further in view of *UmiKer*.

**Conclusion**

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

**Fee Authorization**

Should any extension of time and/or fee be necessary for timely submission of this paper, such extension of time is hereby requested, and the Commissioner is hereby authorized to charge **Deposit Account No. 01-2213 (order no. 5243)**. Any deficiency or overpayment should be charged or credited to this deposit account.

Respectfully submitted,

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3/7

FIG. 6

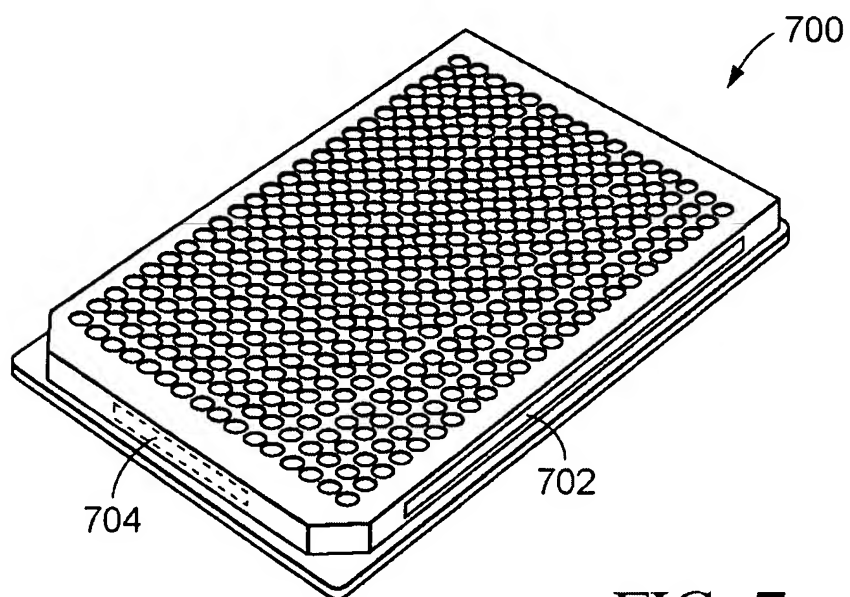
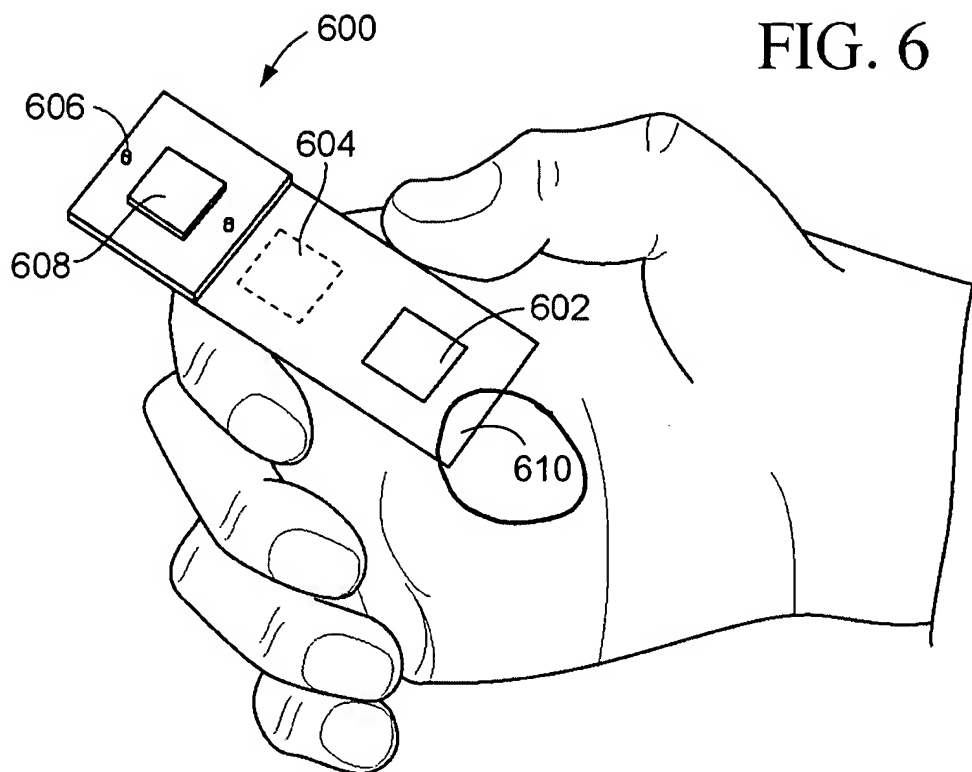


FIG. 7